



HIV/AIDS

San Diego, CA

QUERI Fact Sheet

January 2006

QUERI currently focuses on ten conditions that are prevalent and high-risk among veteran patients: chronic heart failure, colorectal cancer, diabetes, HIV/ AIDS, ischemic heart disease, mental health, polytrauma and blast-related injuries, spinal cord injury, stroke, and substance use disorders.

Human Immunodeficiency Virus (HIV) infection causes a chronic, progressive disease that leads to early death if untreated. HIV infection is characterized by persistent viral replication over an extended period of time during which patients experience few or no symptoms even though the immune system is under siege. Over the course of 5-10 years without proper treatment, HIV infection typically results in significant immune depletion and dysfunction that leads to chronic symptoms and greatly increased vulnerability to a variety of opportunistic conditions (i.e., pneumonia, tuberculosis, and various cancers) that characterize AIDS (Acquired Immune Deficiency Syndrome).

According to the Centers for Disease Control and Prevention, in 2002 there were an estimated 800,000 to 900,000 individuals known to be living with AIDS or HIV infection in the U.S. In the same year, 19,346 patients received HIV care in the Veterans Health Administration (VHA). This makes VHA the largest single provider of HIV care in the U.S.

The HIV/AIDS Quality Enhancement Research Initiative (HIV-QUERI) utilizes the QUERI 6-step process (see back page) to improve the quality of care and health outcomes of veterans with HIV. HIV-QUERI also produces critical information on best practices deemed essential for the effective care of veterans with HIV. HIV-QUERI's mission is to make evidence-based HIV care more accessible, optimize the application of evidence-based HIV therapies, and improve the delivery of collabora-

tive and comprehensive treatment of comorbid conditions in order to ensure better health for veterans who live with HIV.

HIV-QUERI Projects and Findings

Current HIV-QUERI activities include the active development of a new implementation research portfolio, as well as the completion and dissemination of earlier projects. The following are some examples of current projects that focus on health issues of critical importance to veterans with HIV.

Describing HIV-Infected Veterans in Care

The Quality Enhancement Database (QED) for HIV, a research-standard database, is created from the VA HIV registry, which is used to monitor trends in care and measure quality improvement outcomes. Importantly, blind serological testing overseen by HIV-QUERI revealed that the HIV registry does not track all veterans with HIV; the importance of improved screening and casefinding is paramount, as is

reflected in the development of a stream of research activities in those areas.

QED inpatient files from 1993 to 2001 contain data for 102,355 unique hospitalizations, which reveal some interesting trends. [These data are for male patients only, as less than 5% of VA's HIV-infected population is female; women's statistics are reported elsewhere.]

HIV-QUERI research has shown that 55% of HIV patients in VA care during 2001 received acceptable combinations of antiretroviral (ARV) drugs where clearly indicated, ranging from 27% to 82% per facility. However, 4% received single drugs or combinations of drugs that are not recommended, ranging from 0% to 21% of patients per site. These findings led to the development of several research projects that emphasize the importance of optimizing therapy by addressing gaps in provider adherence to evidence-based guidelines for appropriate HIV care, such as prescribing ARV drugs and opportunistic infection prophylaxis, and monitoring immune and virologic status at regular intervals.

The HIV-QUERI Executive Committee

Each QUERI Executive Committee is co-chaired by a research expert and a clinician. The co-research coordinators for HIV-QUERI are **Allen Gifford, MD**, and **Steven Asch, MD, MPH**; the clinical coordinator is **Matthew Goetz, MD**. This Executive Committee includes other experts in the field of HIV/AIDS: **Candice Bowman, PhD, RN** (Implementation Research Coordinator); Samuel Bozzette, MD, PhD; Jane Bugess, RN, MS; James Halloran, MSN, RN, CNS; Mark Holodniy, MD; Amy Justice, MD, PhD; Mr. Don MacIver; Larry Mole, PharmD; Teresa Osborn, RN, MSN; Douglas Owens, MD, MSc; David Rimland, MD; Michael Simberkoff, MD; Joel Tsevat, MD, MPH; and Paul Volberding, MD.

These data also revealed that while total encounters for HIV-positive patients in primary care or infectious disease clinics have remained steady, the frequency of these encounters has declined, as have the number of hospital stays. Among stays for HIV-related conditions, the most frequent diagnoses recorded were for the most common opportunistic infections associated with AIDS. However, there was a rapid and dramatic increase in the percentage of primary discharge diagnoses for acute Hepatitis C – up from approximately 8% in 1993 to 43% in 2001. In addition, alcohol and drug dependency remain among the top five overall primary discharge diagnoses for those with HIV. These facts led to the development of a sequence of inquiries into co-morbid conditions. This and other research initiatives are described below.

Improving Access to HIV Care

Not all veterans at risk for HIV within the VA are appropriately screened, and some that actually are HIV-positive are not receiving evidence-based care. In order to increase access to care, HIV-QUERI investigators have reviewed screening policies and have suggested reforms where needed. This is part of a comprehensive effort to accurately identify all HIV-infected veterans with probable HIV infection and examine their potential barriers to accessing appropriate HIV care.

Optimizing HIV Drug Therapy

Even when combination ARV drugs are appropriately prescribed for HIV, patient adherence to medication regimens is a serious clinical concern, and a major HIV-QUERI focus. Although adherence can be difficult, non-adherence can lead to ineffective viral suppression, substantial risk of drug-resistant HIV, and waste of pharmaceutical resources. The Adherence Care Enhancement (ACE) Clinic is an intensive clinical pharmacist education and support

program aimed at improving adherence to combination ARV medications among HIV-infected veterans. A pilot project is utilizing computer surveys, which may prove more effective for collecting information directly from patients regarding their medication adherence.

Improving Treatment of Co-morbid Conditions

Over the past several years, lipo-dystrophy (abnormal change in fat distribution) has been recognized as a complication of HIV disease and treatment, particularly treatment with protease inhibitors. In addition, there is now increasing concern regarding hyperlipidemia, osteoporosis, and the potential for an increased risk of cardio/cerebrovascular events (i.e., myocardial infarction and stroke). HIV-QUERI recently completed a study of the short-term association of highly active antiretroviral therapy (HAART) and cardio/cerebrovascular events that showed no relationship. The same investigators are now assessing the hazard ratios of inpatient stay and/or mortality for cardio- or cerebrovascular disease among those patients who have received various classes of HAART versus those who have not, as well as time-varying measures of ever or cumulative exposure to classes of HAART therapy as covariates.

Other co-morbid conditions being targeted by HIV-QUERI investigators include smoking (HIV-positive veterans smoke at a rate that is about 10% higher than among other veterans), Hepatitis C infection (common among veterans with HIV), and depression.

THE QUERI PROCESS

The QUERI process includes six steps:

- 1) identify high-risk/high volume diseases or problems;
- 2) identify best practices;
- 3) define existing practice patterns and outcomes across VA and current variation from best practices;
- 4) identify and implement interventions to promote best practices;
- 5) document that best practices improve outcomes; and
- 6) document that outcomes are associated with improved health-related quality of life.

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